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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/119,626 07/21/98 GOTOH

M 0083-0865-2

EXAMINER

022850 MMC2/0316
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ART UNIT

PAPER NUMBER

2831

DATE MAILED:

03/16/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

9/119626

Applicant(s)

Gotoh et al.

Examiner

Cuneo

Group Art Unit

2831

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

- ☒ Responsive to communication(s) filed on 1/31/00
- ☐ This action is FINAL.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 1 1; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-6 is/are pending in the application.
- Of the above claim(s) 4-6 is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-3 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☒ The drawing(s) filed on 7/21/98 is/are objected to by the Examiner.
- ☒ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been received.
- ☐ received in Application No. (Series Code/Serial Number) _____.
- ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____

Attachment(s)

- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 57
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

DETAILED ACTION*Election of Species*

Applicant's election without traverse of paper #11 is acknowledged. The requirement is hereby made final.

Applicant states that claims 1-6 read on the elected species. This is incorrect, and only claims 1-3 read on the elected species. The elected species is the opening being formed in the shape of the rectangle shown in figure 1. The notch recited in claim 4 which extends from the margin to the inside describes the embodiments of figures 9-10 and is not a rectangle. Action on the merits of the claims drawn to species 1a, claims 1-3 follows.

Drawings and Specification

The drawings and specification are objected to for the following points.

- The last paragraph of page 1 is vague: are figures 11-12 prior art? Clarification is required. If they are, the drawings should include a legend of prior art.
- In the drawings, all of the parts shown in section should be cross hatched with a pattern consistent with the patterns shown in MPEP 608.02, page 600-84. Further, the cross hatching of (23) in figure 11 is incorrect. See page 600-84 for the correct pattern.
- Page 14, the second paragraph is confusing. If applicant means that the notches in the conductive layer can be made by several methods (one method being to etch (3), an alternate method being to use a mask) then this paragraph should be rewritten to clarify.

-- Page 14, last two lines, please clarify whether the thickness in discussion is the thickness of the conductive pattern.

-- The specification should point out which parts of the illustrated invention represent the margin of the conductive pattern and the inside thereof as recited in claim 4.

The examiner has revised the abstract to concisely describe the claimed invention. The original abstract is not clear. In line 1, "which comprises" has been changed to "includes." At lines 3-7, "provided on aboard . . . section 4" has been deleted completely. At line 9, the last word "the" has been changed to "a." At lines 7-10, "or a recess extending . . . bonding position" has been enclosed in commas. At line 11, "or recess" has been deleted. At lines 12-13, "at least one" has been deleted. The following has been added to the end of the last sentence: corresponding to the position of connection of a part by ultrasonic bonding."

Treatment of Claims Based on Language and Format

Claims 1-3 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1, lines 1-2 are confusing, because they implies several conductive layers. Examiner suggests rewriting this to recite a board comprising a conductive pattern formed in a conductive layer located on a main body of said board. The remainder of claims 1 and also claims 2-3 should be revised consistent with this change.

Claim 1, line 4-5, "corresponding to bumps of a part mounted by ultrasonic bonding strike" is indefinite, because it is unclear what structural limitations it implies. Claim 1

only recited the board and not the component. If the component is not claimed, the bonding positions are not distinguishable from the rest of the pattern. As such, the claim is only reciting a conductive pattern on a board with a notch in it.

Claim 2 is indefinite. The parent claim 1 does not claim (and cannot claim based on 35 U.S.C. §101) the ultrasonic device, and therefore cannot claim the vibrating direction. Therefore, positively reciting this direction renders the scope of claim 2 indefinite.. Art has not been applied to this limitation and claim 2 is rejected under the same grounds as claim 1.

Treatment of Claims Based on Prior Art

35 U.S.C. §102 states:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) he has abandoned the invention.

(d) the invention was first patented or caused to be patented, or was the subject of an inventor's certificate, by the applicant or his legal representatives or assigns in a foreign country prior to the date of the application for patent in this country on an application for patent or inventor's certificate filed more than twelve months before the filing of the application in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

(f) he did not himself invent the subject matter sought to be patented.

(g) before the applicant's invention thereof the invention was made in this country by another who had not abandoned, suppressed, or concealed it. In determining priority of invention there shall be considered not only the respective dates of conception and reduction to practice of the invention, but also the reasonable diligence of one who was first to conceive and last to reduce to practice, from a time prior to conception by the other.

Claims 1-2 are rejected under 35 U.S.C. §102(b) as being anticipated by Martin (US 3908185).

Martin discloses in figure 3, a circuit board (16) with a conductive pattern (44,46) formed in a conductive layer which is located on the board main body. Two bonding positions are defined in the pattern and an isolated notch (42) is formed in the layer proximate the bonding positions.

Claim 2 is rejected under the same ground because it contains only the structural limitations of claim 1, see the 112 rejections above.

Claims 1 and 3 are rejected under 35 U.S.C. §102(e) as being anticipated by Lebaschi (US 4764485).

Lebaschi discloses a board with a conductive pattern (the pattern of the pads) formed in a conductive layer on a main body of the board with two bonding positions (29) as part of the pattern and where an isolation notch (40') is formed in the conductive layer proximate the bonding positions, and where the notch narrows a part of the pattern

Related Prior Art

The following references are considered pertinent to the present application.

Mims (US 3893223) discloses the formation of aperture between weld spots to prevent propagation of the waves of ultrasonic welding from one weld spot to the next to prevent separation of adjacent welds, in semiconductor technology.

Closing

Any inquiries related to the examination of this application should be directed to Examiner Kamand Cuneo at (703)308-1233 or her supervisor, Examiner Kristine Kincaid, at (703)308-0640. Inquiries of a general nature should be directed to the group 2800 receptionist at (703)308-0956. The general fax number to group 2800 is (703)308-7722 or 7724.


kc

~~December 7, 1999~~

313100

 3-14-00
Dean A. Reichard
Primary Examiner